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The mediating role of stigmatization in the mental health of adolescent victims of sexual violence in Eastern Congo☆

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ABSTRACT

This study aims to explore the factors that explain the mental sequelae of war-related sexual violence and focuses in particular on the role of stigmatization. Drawing on a large-scale quantitative survey undertaken in the war-affected region of eastern Democratic Republic of the Congo, we analyze how stigmatization mediates the mental health impact of sexual violence on adolescent girls who were victims of rape. Twenty-two secondary schools were randomly selected out of a stratified sample in Bunia, Eastern Congo. In a cross-sectional, population-based survey, 1,305 school-going adolescent girls aged 11–23 completed self-report measures assessing war-related traumatic events, experiences of sexual violence, stigmatization, and mental health symptoms. Of the 1,305 participants, 38.2% ($n = 499$) reported experiences of sexual violence. Victims of sexual violence reported more war-related traumatic events and more stigmatization experiences. Several hierarchical regression analyses examined the mediating impact of stigmatization on the relationship between sexual violence and mental health outcomes, thereby controlling for sociodemographics (age, parental availability, and socioeconomic status) and war-related traumatic exposure. Our findings show that this stigmatization largely explains the mental health impact of sexual violence, in particular, on adolescent girls' reported symptoms of depression (full mediation) and posttraumatic stress (avoidance and total PTSD: full mediation; hyperarousal: partial (40%) mediation). No evidence of mediation by stigmatization was found for symptoms of anxiety and intrusion. Stigmatization plays thus an important role in shaping the mental sequelae of sexual violence, a finding with major consequences for clinical practice.

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Introduction

For decades, the eastern regions of the Democratic Republic of the Congo (DRC) have been affected by war, costing the lives of over five million people (International Rescue Committee Survey, 2008), and marked by massive human rights abuses against civilians (Johnson et al., 2010). These war tactics, using civilians as targets of violence, show how organized violence often aims primarily to affect families, kinship, and community bonds and, as a result, pervasively disrupts those core social ties (Derluyn, Vindevogel, & De Haene, 2013).

In the context of the DRC, one of these weapons of war that disrupts social bonds is the excessive use of sexual violence (Bartels, Van Rooyen, Leaning, Scott, & Kelly, 2010; Duroch, McRae, & Grais, 2011; Maedl, 2011; Peterman, Palermo, & Bredenkamp, 2011; Wakabi, 2008), with overall estimates of between 1.69 and 1.80 million Eastern Congolese women aged 15–49 years having reported histories of being raped (Peterman et al., 2011). Despite formal peace agreements, sexual violence is still highly prevalent (Maedl, 2011), with increasing reports of rape by civilian perpetrators (Bartels et al., 2010; Duroch et al., 2011), in particular against minors (Kalisya et al., 2011). Through targeting women in communities in which female members' social position is intricately linked to their sexual trajectories, sexual violence operates as a powerful weapon for destroying social connectedness (Derluyn et al., 2013). Indeed, the social exclusion of victims of sexual violence is highly prevalent in war-affected communities in the DRC and is documented as being associated with the pervasive stigmatization of violated girls and women (e.g., Kelly et al., 2012). Here, victims are labeled, perceived according to negative stereotypes (e.g., contaminated, defiled, of less value, and worthless), and are discriminated against within their own families and communities (Dolan, 2010; Kelly et al., 2012).

This disruption of community ties through stigmatization also leads to the question of how pervasive stigmatization in the aftermath of sexual violence may shape mental health sequelae in victims. Previous studies have documented the impact of war-related sexual violence on victims' mental health (Bartels et al., 2010; Johnson et al., 2008, 2010), showing a robust association between sexual violence and posttraumatic and depressive symptomatology. Furthermore, studies have equally shown how, in the aftermath of sexual violence, victims are confronted with negative social consequences invoked by sexual violence, such as negative social reactions, stigmatization, abandonment, rejection, and loss of social support networks (Campbell, Ahrens, Sefl, Wasco, & Barnes, 2001; Filipas & Ullman, 2001). However, studies evaluating to what extent these social disruptions mediate (i.e., explain) posttraumatic and depressive mental health outcomes in victims of sexual violence in contexts of organized violence are very scarce: Only one study documented how social stigmatization explained depressive functioning in Sierra Leonean former child soldiers who were victims of rape (Betancourt, Agnew-Blais, Gilman, Williams, & Ellis, 2010). This study therefore aims at furthering an understanding of the intricate interactions between mental health outcomes and social disruption resulting from sexual violence in war-affected communities, and analyses the mediating role of stigmatization in shaping the mental health sequelae of sexual violence. Specifically, considering the paucity of research on this population, we study the extent to which stigmatization explains (i.e., mediates) the relationship between sexual violence and mental health outcomes in Eastern Congolese adolescent girls, given continuing reports of the high prevalence of sexual assaults on adolescent girls and their particularly vulnerable position in the DRC (Kalisya et al., 2011; Kelly, VanRooyen, Kabanga, Maclin, & Mullin, 2010).

Methods

Participants and procedure

The study was conducted in the Ituri district of Eastern DRC, a region afflicted for decades by armed conflict (Human Rights Watch, 2003; Médecins sans frontières, 2005). Twenty-two secondary schools from all 10 neighborhoods across the large region in and around Ituri's capital city, Bunia, were selected using stratified sampling in relation to location (rural, suburban and urban regions) and religion; no schools refused to participate. In all schools, all female pupils in the second and third grades of secondary school (The Congolese educational system consists of six years primary school followed by six years secondary school. Second to third year students of secondary school could be expected to be from 13 to 15 years old. However, prolonged conflict in Eastern Congo has affected the educational participation and attainment of Congolese youths, resulting in broad age varieties in some class groups.), where literacy and comprehension of the questionnaires could be assumed, were invited and consented to take part in the study ($n = 1{,}305$). The participants were between 11 and 23 years old. The questionnaires were administered in a six-week period in April and May 2011 during a 60- to 90-min course session while the boys of the respective classes were engaged in other activities organized by the teacher. A description of the study was provided to the participants and their written informed consent was obtained. The questionnaires were self-administered, and research assistants provided thorough and structured guidance. To promote inter-researcher reliability, extensive training (90 h) was provided to all research assistants. Questionnaires were administered in French because this is the official language in secondary schools and a pilot study showed that students preferred French questionnaires over translated Kiswahili versions. The researcher provided participants her contact information and information on local psychological support projects for those in need of further professional care. Agreements with these local services were made beforehand to guarantee adequate referral of study participants, if needed.

Ethical approval for the study was given by the Ethical Committee of the Faculty of Psychology and Educational Sciences, Ghent University.

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Measures

Five self-report questionnaires were administered. These had been extensively used with adolescents in war-affected regions and already cross-culturally adapted for use with Eastern Congolese adolescents (Mels, Derluyn, Broekaert, &Rosseel, 2009b). First, a sociodemographic questionnaire investigated variables such as age, place of birth, socioeconomic situation (operationalized as type of house), and parental availability (both parents alive or one/both parents deceased). Second, the Adolescent Complex Emergency Exposure Scale (ACEES) (Mels et al., 2009b) measured exposure to 14 context-specific, potentially traumatic war-related events (yes/no), such as having witnessed people being killed, being separated from family, or having witnessed rape. Five further questions (yes/no) concerning sexual violence experiences were added: in addition to the question "Did you experience rape?" four questions referred to other forms of sexual violence or coercive sexual experiences, all of which were mentioned as sexual violence in 2006 Congolese legislation (i.e., being forced to have sex with a boyfriend, with someone you are acquainted with, or in exchange for goods, and being forced to marry).

Third, a cross-cultural and contextually adapted version, following the procedure as described by Mels et al. (2009b), of the Everyday Discrimination Scale (Williams, Yan Yu, & Anderson, 1997) was used. Its 14 items (yes/no) focused on experiences of different aspects of stigmatization during the past month, including perceived discrimination and social exclusion in the familial and community context (e.g., being treated as if you were different, being isolated by the nuclear family, being treated badly by family members).

Fourth, symptoms of posttraumatic stress disorder (PTSD) were measured with the culturally adapted Congolese (French) version (Mels et al., 2009b) of the Impact of Event Scale-Revised (IES-R) (Weiss & Marmar, 2004), a diagnostic self-administered questionnaire comprised of 22 questions to be answered on a Likert scale (from 1 to 5), accompanied by a visual probe. Items can be grouped into three subscales (symptoms of intrusion, avoidance and hyperarousal). Cronbach's alphas in this study were between .77 and .83.

Lastly, the culturally adapted Congolese (French) version (Mels, Derluyn, Broekaert, & Rosseel, 2009a) of the Hopkins Symptom Checklist-37 for Adolescents (HSCL-37A) (Bean, Derluyn, Eurelings-Bontekoe, Broekaert, & Spinhoven, 2007), measuring symptoms of anxiety (12 items), depression (13 items) and externalizing problems (12 items), was used. All items had to be answered on a Likert scale (from 1 to 4), accompanied by a visual probe. Cronbach's alphas in this study were between .60 (externalizing scale – left out in further analyses) and .85.

Statistical analysis

Differences in sociodemographics and traumatic exposure between both groups (victims and non-victims of sexual violence) were investigated through χ^2-analyses and *t*-tests.

The impact of stigmatization (total sum-score of the 14 items) on the relationship between sexual violence experiences (0 = No, 1 = Yes) and mental health outcomes (HSCL-37A anxiety and depression scores; IES-R subscales and total score) was investigated through several hierarchical regression models, and followed the three-step approach suggested by Baron and Kenny (1986). We thereby controlled for sociodemographic variables (age, parental availability [both parents alive versus one/both parents deceased], and type of housing [measure of socioeconomic status]), and war-related traumatic exposure (total ACEES sum-score). First, stigmatization was regressed on sexual violence, while controlling for the sociodemographics and total traumatic exposure. Next, each mental health outcome was regressed on sexual violence and on the sociodemographics and total ACEES score. Third, stigmatization was added as independent variable to the models defined in the second step. In all models, the two-way interaction between sexual violence and stigmatization was included. Full mediation is obtained if an observed effect of sexual violence on a mental health outcome in the second step disappears; partial mediation occurs when the effect of sexual violence (absolute value) on a mental health outcome decreases but remains significant. Moreover, rape must be significantly associated with stigmatization to conclude that mediation takes place. The mediation model is illustrated in Fig. 1: the *c*-parameter represents the direct effect of sexual violence on mental health; the indirect effect of sexual violence on mental health is obtained by multiplying the *a*- and *b*-parameters.

Because we included an interaction in our model and to facilitate interpretation of the results obtained, all continuous variables were standardized prior to our analyses. If the conditions for mediation held, the standard error of the indirect effect was obtained by bootstrapping, using the Lavaan package (Rosseel, 2012). Alpha was set at .01. All statistical analyses were performed using R-2.15.2 (R Development Core Team, 2012).

Results

Sociodemographic variables

Of the participants, 38.2% ($n = 499$) confirmed having been victims of sexual violence, while the other 61.8% ($n = 806$) reported they were never victims of any form of sexual violence. Some sociodemographic differences were found between both groups (Table 1).

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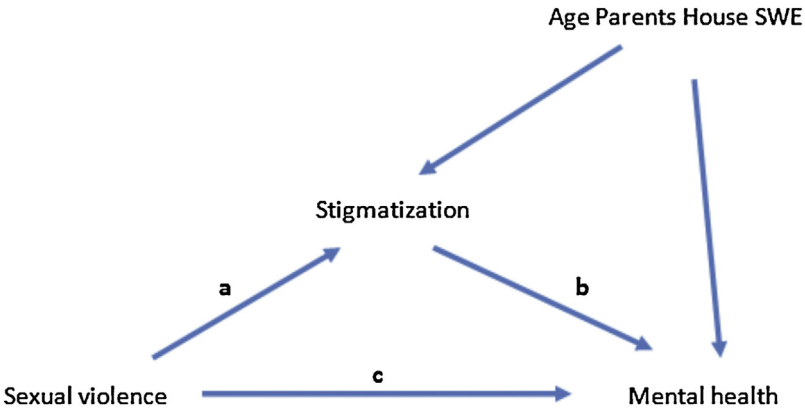

Fig. 1. The mediation model.

Table 1
Sociodemographic characteristics of participants.

	Total group (n = 1,305)	No sexual violence experienced (n = 806)	Experienced sexual violence (n = 499)	χ^2/t
Age[a]	15.89 (1.54; 11–23)	15.73 (1.49; 11–23)	16.15 (1.59; 12–22)	−4.824***
Socioeconomic status				13.852***
Brick house	617 (46.3)	404 (50.5)	197 (39.9)	
Non-brick house	715 (53.7)	396 (49.5)	297 (60.1)	
Parental availability				5.459*
Both parents alive	781 (78.3)	486 (80.7)	295 (74.5)	
At least one parent dead	217 (21.7)	116 (19.3)	101 (25.5)	

N (%).
[a] Mean (SD; range).
* $p < .05$.
*** $p < .001$.

War-related traumatic exposure, stigmatization, and mental health

Overall, adolescent girl victims of sexual violence reported more war-related traumatic experiences (Table 2), more experiences of stigmatization and social exclusion (Table 3), and higher levels of mental health problems (Table 4).

Table 2
Exposure to war-related traumatic events (SWE).

	No sexual violence experienced (n = 806)	Experienced sexual violence (n = 499)	χ^2/t	*OR*
Have been separated from family	137 (17.2)	147 (29.9)	27.87***	2.06
Have witnessed violent acts against family members or friends	84 (10.5)	88 (18.2)	14.48***	1.89
Had family members or friends violently killed during the war	292 (37.3)	223 (45.9)	8.82**	1.43
Experienced pillage or setting your house on fire	335 (43.1)	257 (53.5)	12.68***	1.52
Experienced gunfire attacks	276 (35.7)	249 (53.1)	35.45***	2.04
Have seen somebody being killed	245 (31.0)	234 (50.2)	45.00***	2.24
Have seen dead bodies or mutilated bodies	250 (31.5)	241 (49.4)	40.41***	2.13
Have been injured during the war	36 (4.5)	77 (16.4)	50.20***	4.16
Have been imprisoned	6 (0.7)	68 (13.8)	94.34***	21.30
Have been enrolled in an armed group	3 (0.4)	45 (9.6)	28.30***	28.30
Have been kidnapped by an armed group	16 (2.0)	69 (13.9)	69.40***	7.96
Have been forced to kill, injure or rape someone themselves	26 (3.3)	49 (10.5)	26.58***	3.50
Have seen someone being raped	67 (8.4)	113 (23.6)	56.65***	3.40
Total number of traumatic events (mean, SD)	2.20 (1.92)	3.73 (2.74)	10.96***	d = 0.68[a]

N (%).
[a] Cohen's *d*.
** $p < .01$.
*** $p < .001$.

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Table 3
Experiences of stigmatization and social exclusion.

	No sexual violence experienced ($n = 806$)	Experienced sexual violence ($n = 499$)	χ^2/t	*OR*
Corporal punishment by family member	79 (9.9)	236 (47.7)	235.73***	8.33
Hear that people say bad things about you or your family	294 (36.8)	269 (54.7)	39.86***	2.07
You are treated worse than other people	122 (15.4)	196 (40.2)	98.30***	3.70
You are treated with less respect than other people	145 (18.2)	219 (45.0)	104.82***	3.66
You are treated badly by a family member	102 (12.8)	182 (37.1)	102.71***	4.01
Rejected/abandoned by your (close) family	44 (5.5)	125 (25.6)	105.63***	5.91
Rejected/abandoned by your community	44 (5.5)	147 (30.1)	143.83***	7.41
Treated as if people are scared of you	63 (7.9)	169 (34.8)	146.13***	6.24
Threatened by others	203 (25.5)	215 (44.1)	46.98***	2.31
Called dishonest	107 (13.4)	188 (38.4)	106.20***	4.03
People act as if they are better than you are	323 (40.5)	275 (56.0)	28.86***	1.87
People act as if they are smarter than you are	301 (38.1)	269 (55.3)	35.52***	2.01
You receive poorer service than other people at stores/services	147 (18.6)	156 (31.9)	29.06***	2.06
You are insulted	299 (37.6)	274 (55.6)	39.06***	2.08
Total number of stigmatization experiences (mean, SD)	2.82 (2.50)	5.86 (3.64)	15.43***	$d = 0.97$[a]

N (%).
[a] Cohen's *d*.
*** $p < .001$

Table 4
Mental health problems.

	No sexual violence experienced ($n = 806$)	Experienced sexual violence ($n = 499$)	*t*
IES-R			
Avoidance	1.80 (.70)	2.11 (.74)	−7.562***
Intrusion	1.71 (.63)	2.00 (.76)	−7.439***
Hyperarousal	1.71 (.68)	2.12 (.78)	−10.127***
Total IES-R score	1.74 (.61)	2.07 (.67)	−9.138***
HSCL-37A			
Depression	1.61 (.32)	1.76 (.37)	−7.627***
Anxiety	1.71 (.37)	1.83 (.38)	−5.589***
Internalizing[a]	1.65 (.31)	1.79 (.34)	−7.136***

Mean (SD).
[a] Internalizing = anxiety + depression subscales.
*$p < .05$.
**$p < .01$.
*** $p < .001$.

The mediating role of stigmatization

First, the analysis showed that, after controlling for age, parental availability, socioeconomic status (type of housing) and total number of war-related traumatic experiences (ACEES), sexual violence was positively associated with stigmatization ($R^2 = .249$, R^2 change = .113, $\beta = 0.76$, $p < .001$): having experienced sexual violence led to a .76 standard deviation increase in the amount of stigmatization experienced.

Mediation analyses revealed that the impact of sexual violence on symptoms of depression (HSCL-37A), avoidance (IES-R), and total PTSD (total IES-R) is fully mediated by stigmatization (Table 5). Being a victim of sexual violence led indirectly on average to a 0.24 standard deviation increase in the depression score ($\beta = 0.24$, $SE = 0.04$, $p < .001$), a 0.17 standard deviation increase ($\beta = 0.17$, $SE = 0.04$, $p < .001$) in avoidance scores, and a 0.17 standard deviation increase ($\beta = 0.17$, $SE = 0.04$, $p < .001$) in the total IES-R score. It is important to note that the coefficients for depression and avoidance were estimated for a mean level of stigmatization because an interaction effect between sexual violence and stigmatization was observed. The effect of sexual violence on hyperarousal (IES-R) is partially (40%) mediated by stigmatization: being a victim of sexual violence led directly on average to a 0.21 standard deviation increase in hyperarousal symptoms ($\beta = 0.21$, $SE = 0.06$, $p < .001$), while indirectly a 0.14 standard deviation increase was observed ($\beta = 0.14$, $SE = 0.04$, $p < .001$). No evidence of mediation by stigmatization was found for anxiety (HSCL-37A) and intrusion symptoms (IES-R).

Discussion

This study explored the role of stigmatization in explaining the psychological sequelae of sexual violence against female adolescent victims living in a (post-)war context. First, more than one third of the adolescent girls reported experiences of sexual violence (both rape and intimate partner violence, both during and after the armed conflict), a prevalence that is

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Table 5
Final regression models investigating the mediating role of stigmatization.

	β	*SE*	*t*	R^2 change
HSCL-37A – depression				
Intercept	−0.23***	0.05	−4.45	
Age	0.03	0.03	1.25	
Socioeconomic status (ref = no brick house)	0.31***	0.06	4.82	
Parental availability (ref = at least one died)	0.21***	0.06	3.77	
Total war-related traumatic exposure (SWE)	0.22***	0.03	7.51	
Sexual violence (ref = yes)	0.01	0.06	0.17	0.162
Total number of stigmatization experiences	0.32***	0.05	6.44	0.037
Sexual violence × number of stigmatization experiences	−0.17**	0.06	−2.77	0.006
HSCL-37A – anxiety				
Intercept	−0.07	0.06	−1.27	
Age	−0.01	0.03	−0.30	
Socioeconomic status (ref = no brick house)	0.13*	0.06	2.20	
Parental availability (ref = at least one died)	0.17*	0.07	2.64	
Total war-related traumatic exposure (SWE)	0.24***	0.03	7.93	
Sexual violence (ref = yes)	−0.05	0.07	−0.69	0.108
Total number of stigmatization experiences	0.33***	0.05	6.26	0.019
Sexual violence × number of stigmatization experiences	−0.28***	0.07	−4.25	0.015
IES-R – intrusion				
Intercept	−0.20	0.05	−3.68	
Age	0.00	0.03	0.03	
Socioeconomic status (ref = no brick house)	0.22***	0.06	3.84	
Parental availability (ref = at least one died)	0.04	0.07	0.61	
Total war-related traumatic exposure (SWE)	0.34***	0.03	11.43	0.178
Sexual violence (ref = yes)	0.09	0.07	1.30	0.183
Total number of stigmatization experiences	0.16**	0.05	3.20	0.006
Sexual violence × number of stigmatization experiences	−0.12	0.06	−1.85	0.003
IES-R – avoidance				
Intercept	−0.16**	0.06	−2.95	
Age	0.01	0.03	0.45	
Socioeconomic status (ref = no brick house)	0.16**	0.06	2.66	
Parental availability (ref = at least one died)	0.11	0.07	1.60	
Total war-related traumatic exposure (SWE)	0.25***	0.03	8.28	
Sexual violence (ref = yes)	0.16*	0.07	2.41	0.136
Total number of stigmatization experiences	0.25***	0.05	4.75	0.012
Sexual violence × number of stigmatization experiences	−0.21**	0.07	−3.09	0.001
IES-R – hyperarousal				
Intercept	−0.28***	0.05	−5.45	
Age	−0.02	0.03	−0.73	
Socioeconomic status (ref = no brick house)	0.23***	0.05	4.10	
Parental availability (ref = at least one died)	0.12	0.06	1.88	
Total war-related traumatic exposure (SWE)	0.31***	0.03	11.04	
Sexual violence (ref = yes)	0.21***	0.06	3.34	0.229
Total number of stigmatization experiences	0.18***	0.05	3.79	0.024
Sexual violence × number of stigmatization experiences	−0.02	0.06	−0.35	0.000
IES-R – total IES-R				
Intercept	−0.23***	0.05	−4.37	
Age	0.00	0.03	0.06	
Socioeconomic status (ref = no brick house)	0.22***	0.06	3.96	
Parental availability (ref = at least one died)	0.09	0.06	1.38	
Total war-related traumatic exposure (SWE)	0.33***	0.03	11.44	
Sexual violence (ref = yes)	0.16*	0.06	2.46	0.212
Total number of stigmatization experiences	0.22***	0.05	5.49	0.014
Sexual violence × number of stigmatization experiences	−0.15*	0.06	−2.38	0.004

Note that alpha was set at 0.01. Indirect effects are mentioned in the text.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

comparable to or even slightly higher than those documented in other recent studies of Eastern Congolese women (Johnson et al., 2010).

Second, similar to other studies (e.g., Resick, 1993), adolescent girls who experienced sexual violence showed pervasive mental health problems, in particular symptoms of depression, anxiety, and posttraumatic stress. Moreover, girl victims of sexual violence reported more war-related traumatic experiences, such as witnessing violence against family members, being injured during war, and being captured by armed groups. The precise chronology of these different war-related traumatic events, including the experience of sexual violence, remains unclear. It is most likely that sexual violence went hand in hand with other war-related traumatic events, such as being captured or witnessing violence against family members, yet in some

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cases, sexual violence and its social consequences (such as exclusion and stigma) will have rendered girls more vulnerable to experiencing other war-related trauma (such as being enrolled in an armed group).

Third, in congruence with other studies (e.g., Filipas & Ullman, 2001; Steiner et al., 2009), adolescent girls who experienced sexual violence faced far more experiences of stigmatization, including feelings of being treated worse than others, being insulted, and rejection by and exclusion from family and/or community.

Furthermore, our findings show that this stigmatization – more than the direct impact of the sexual violence experiences – largely explains the mental health impact of sexual violence, in particular adolescent girls' reported symptoms of depression and posttraumatic stress (avoidance, hyperarousal, and total PTSD symptoms). These observed effects of stigmatization on mental health outcomes in victims of sexual violence underwrite qualitative findings of victims expressing how stigma can have as severe an impact as the actual rape (Rees et al., 2011). The use of sexual violence in armed conflicts and the continuation of these acts in post-conflict contexts, also by civilians, thus clearly destroys the social fabric of families and communities, resulting in a pervasive impact on individual victims' health. Here, the discrepancy between full mediation for avoidance and depressive symptoms and the lack of mediation by stigmatization for intrusion and anxiety symptoms raises the question of to what extent symptoms of avoidance and depression operate as expressions of disrupted social relationships. Indeed, while intrusion and anxiety symptoms may stem from direct emotional and psychophysiological responses to reliving traumatic events of sexual abuse, our findings indicate that symptoms of avoidance and depression may constitute a marker of a stigmatized social position within the individual's family and community. The lack of mediation by stigmatization for intrusion and anxiety symptoms thus also shows that besides the powerful influence of stigmatization on victims' mental health, sexual violence also directly affects girls' psychological well-being (cf. Filipas & Ullman, 2001). This illustrates the direct and far-reaching mental health impact of sexual violence, pointing clearly to the devastating impact of this extremely widespread phenomenon of sexual violence in the conflict and post-conflict regions of Eastern DRC.

Implications

These findings have important clinical implications for providing psychosocial interventions to adolescent victims of sexual violence in conflict and post-conflict settings. Overall, there is a clear need for an integrative approach that includes both the individual victim and the entire social environment (family, community, and society at large) (Kelly et al., 2012; Ullman & Filipas, 2001). Because stigmatization largely explains the impact of sexual violence on the mental health of adolescent victims, interventions are recommended to include family- and system-oriented approaches such as family therapy, community interventions, and sensitization activities. Moreover, attention needs to be given to particular (wrong) cognitive perceptions of individual victims regarding their possible role in the acts of sexual violence and to providing victims with support in working out how to address negative social reactions. Third, at the level of society overall, sensitization actions are needed to inform civilians, the police and the military about possible misperceptions about sexual violence, with the aim of reducing both the prevalence of acts of sexual violence and the large-scale stigmatization of and discrimination against victims of this severe human rights violation.

Limitations

Interpretation of the findings needs to consider the following study limitations. First, the sample integrates only school-going adolescent girls in the environment of Bunia, the largest city of the Ituri district, and excludes out-of-school adolescents, reducing the study's generalizability to out-of-school adolescent girls. In addition, boys were not included in the study in light of the even stronger taboo against reporting sexual violence against them, which should definitely not be read as denying that boys ever become victims of sexual violence (Johnson et al., 2010). Third, it is likely that the prevalence of sexual violence reported here is an underestimation of reality, given the fear of stigmatization when reporting on sexual violence in Eastern Congo (Duroch et al., 2011), although the inclusion of different forms of sexual violence (including non-consensual sexual experiences within relationships) in the questionnaires might have facilitated greater openness in reporting on sexual violence experiences. Furthermore, the expectations of particular participants that they would receive material compensation for their participation – although they were thoroughly informed no compensation would be given – might have influenced participants' responses. Fourth, the questionnaires could not cover all mental health problems, or all participants' experiences of trauma and stigmatization, although the rigorous pre-study cross-cultural and contextual validation process of all instruments significantly increased their feasibility for use in this particular context.

Conclusion

Our results suggest that adolescent girls in Eastern Congo are highly likely to experience human rights abuses, in particular sexual violence. In addition to the direct impact of these experiences of sexual violence on their mental health, they are also confronted with widely impacting stigmatization and social exclusion by both family and community. We found a strong mediating impact of stigmatization on the psychological sequelae of sexual violence in this war-torn region. These findings call for comprehensive actions, supporting individuals, families, communities, and society at large in dealing with the trauma and impact of sexual violence.

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Conflict of interest

There are no conflicts of interest for any of the authors.

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